



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/713,604

11/14/2003

Morito Morishima

2552-000058

2514

27572 7590 04/25/2007
HARNES, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

WRIGHT, KAINOA

ART UNIT

PAPER NUMBER

2861

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

04/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/713,604

Applicant(s)

MORISHIMA, MORITO

Examiner

Kainoa BK Wright

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/19/2005; 1/21/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1 & 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the limitation, "...optically transformed light and dark portions." It is unclear what these light and dark portions are, and examiner has not found mention of them in applicants specification. For the purpose of examination, examiner will treat the light and dark portions as referring to the pits, pixels and other markings formed on the medium by the laser.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shin et al. (US 5498509) in view of Arai et al. (US 5587772) and Vincent (US 6069645).

Shin teaches an optical disk recording device for recording an image on an optical disk by irradiating the disk with a laser according to data from a data source 16 thru the use of a controller 17.

Regarding Claims 4-5: Shin fails to teach a storing unit for storing laser information indicating an irradiation interval and a light intensity to be applied to the disk according to a formation spacing when the dots have the same and are formed at a constant interval.

Arai teaches a storing unit 31 for storing laser information indicating an irradiation interval (i.e. time between irradiation pulses or pulse width) to be applied to a recording medium according to a formation spacing (i.e. resolution or spacing between dots) when the dots have the same length (i.e. spot size) and are formed at a constant interval (i.e. spacing between dots or resolution) (Fig.6 & col.7, ll.11-67). The dots having the same length and being formed at a constant interval corresponds to a situation where there is no switch in desired formation spacing (Fig.6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the optical disk image writing apparatus of Shin to include the teachings of Arai in order to be able to image according to different image resolutions.

Vincent teaches a storing unit for storing laser information indicating an intensity level of laser light to be applied to a recording medium according to a desired dot size (col.4, ll.28-47); a desired spot size directly effecting a formation spacing (i.e. a spacing between dots or resolution), because a change in spot size necessarily the boundaries of adjacent spots, as is known in the art of etching a substrate (i.e. a disk).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the optical disk image writing apparatus of Shin to include the teachings of Vincent in order to define a beam spot size for a desired image resolution.

Regarding Claim 3: Shin further fails to teach step-wisely changing at least one of length and formation spacing of the dots by changing the irradiation timing.

Ari further teaches step-wisely changing at least one of length and formation spacing of the dots by changing the irradiation timing (Fig.6). The changing of length and formation spacing corresponding to a situation where there is a switch in desired formation spacing (i.e. resolution).

Motivation follows from claims 4-5 above.

Regarding Claim 1: The method of claim 1 corresponds to the operation of the apparatus of claim 5 and the art applied towards claim 5 is analogously applied towards claim 1.

Regarding Claim 2: Shin implies that the process is carried out for each image of a plurality of images to be drawn, as the state of the art shows that a plurality of legible characters (i.e. images) are generally desired (see Hirotsune et al. US 6532034).

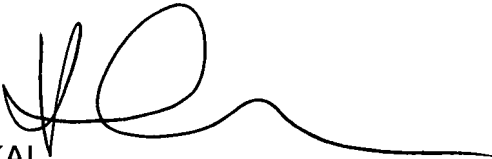
Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hirotsune et al. (US 6532034)..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kainoa BK Wright whose telephone number is (571) 272-5102. The examiner can normally be reached on M-F 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on (571) 272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


KAI
4/20/07


HAI PHAM
PRIMARY EXAMINER